

*Lesson of the week***“High” ear piercing and the rising incidence of perichondritis of the pinna**

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Be vigilant in treating serious complication of auricular perichondrial abscess early and aggressively

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Ear piercing is common, and multiple piercing of the ear has become increasingly fashionable. Often this involves “high” piercing, which requires puncture through the cartilage of the upper third of the pinna. Infection at this site results in auricular perichondritis. Soft tissue infection is a recognised complication at any site, but the subperiosteal abscess associated with perichondritis often leads to loss of cartilage and to an unsightly deformity known as “cauliflower ear,” which has a poor chance of good reconstruction fig 1 (left). Cauliflower ear is more likely to occur with transcartilagenous ear piercings. The usual infective agent in auricular perichondritis is *Pseudomonas aeruginosa*, to which antibiotic resistance seems to be increasing.¹ The vast majority of piercings are performed by non-medical practitioners, such as jewellers, hairdressers, or tattooists. These practitioners and their customers may not fully appreciate the implications of cartilage damage resulting from high piercing. We present three cases in which auricular perichondritis and abscess formation was associated with high piercing. Despite prompt intervention, including drainage under general anaesthetic, cosmetic deformity proved difficult to avoid.

Case reports

Case 1—A 16 year old man presented to an accident and emergency department with a painful and swollen left pinna, two days after high, transcartilagenous piercing. On examination, there was an erythematous, fluctuant, and tender swelling of the superior aspect of the left auricle which was pointing fig 1 (centre). Auricular subperiosteal abscess was diagnosed, and this was treated surgically by incision and drainage under general anaesthetic and with ciprofloxacin. A pressure dressing was applied for two days, then the patient was

discharged on oral antibiotics. On review at three months the upper third of the auricle was moderately deformed. The patient did not request further treatment.

Case 2—A 21 year old woman presented to an ear, nose, and throat department with extensive perichondritis of the right pinna one week after transcartilagenous piercing. Before referral she had been treated with oral antibiotics by her general practitioner, with little improvement. On examination, a frank abscess was not seen, and she was admitted for intravenous antibiotic treatment. Despite this treatment, by the following day a subperiosteal abscess had developed, requiring incision, drainage, and a pressure dressing. On review at three months, the patient had developed an unsightly cauliflower ear, with loss of supporting cartilage in the upper pinna.

Case 3—A 23 year old woman was referred by her general practitioner with multiple, unsightly lesions on her right pinna, which occasionally discharged pus. She had undergone multiple transcartilagenous piercings five months earlier. She explained that the wounds had never quite healed despite removing the earrings four months earlier, and that they were causing her discomfort. On examination, three discrete unsightly lesions were seen, involving the full thickness of the left pinna fig 1 (right). At the patient's request, she underwent surgery for excision of these lesions. At operation, the lesions were seen to consist of granulations, indicating chronic inflammation, and were associated with significant erosions of the cartilage. Although the initial cosmetic results were satisfactory, the patient was warned that notching of the outer rim of the pinna may occur in the long term after scarring and contraction, which often occurs when such cartilagenous damage heals.

Discussion

The practice of body piercing, and in particular high, transcartilagenous ear piercing, for decorative purposes has been increasing in popularity. Figure 2 shows that the incidence of auricular perichondritis in England and Wales more than doubled between 1990-1 and 1997-8. In our own local experience we have also observed an increase over the past two years in the incidence of auricular perichondritis and perichondrial abscess after high piercing.

A survey by health officials in Rochdale, Greater Manchester, found that 95% of local general practitioners had treated complications—mainly infections—arising from body piercing.² This was one of the main points discussed at the recent annual congress of the Royal College of Nursing in April 2000.² Delegates at the congress voted unanimously to press the government to act, after hearing that children as

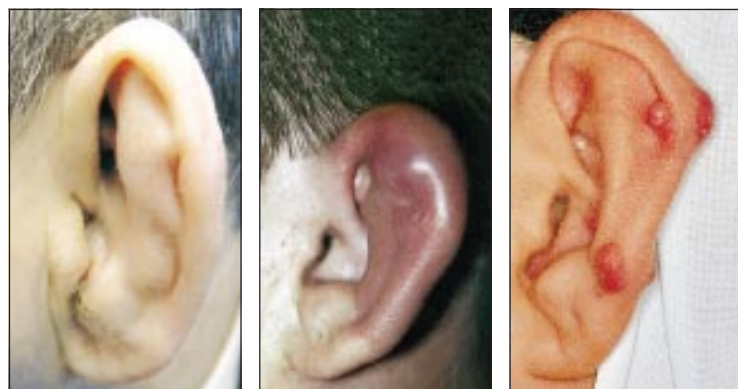


Fig 1 Left: “Cauliflower ear” after auricular perichondritis. Centre: Subperiosteal abscess after “high” transcartilagenous ear piercing. Right: Multiple chronic inflammatory lesions of auricle at sites of previous piercings

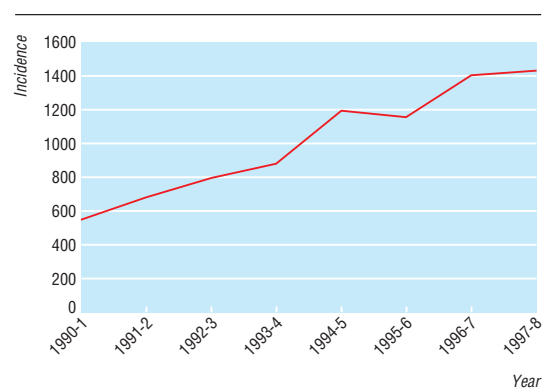


Fig 2 Trend of auricular perichondritis over time in England and Wales from 1990-1 to 1997-8 (codes for the international classification of diseases (ICD) changed in 1995-6 from ICD-9 to ICD-10). Based on data from the Department of Health's hospital episodes system

young as 6 were having piercings in their navels, ears, and noses.

The potential complications of perichondritis are serious. The cosmetic sequelae, such as cauliflower ear, may be considerable. A case of endotoxic shock arising from ear piercing has been reported.³ Several other reports of complications after high transcartilaginous ear piercing have been published⁴⁻⁶; the three case reports illustrate various complications related specifically to transcartilaginous ear piercings. Transcartilaginous infections progress rapidly, and aggressive management at the earliest opportunity is desirable to prevent complications. The long term cosmetic problems arise from resultant destruction of cartilage that forms the skeleton of the auricle. It is therefore important to recognise the early features of perichondritis—which include local heat, erythema, and pain—before swelling ensues. As the perichondritis progresses, an abscess will develop, peeling the perichondrial layer off the cartilage. Because cartilage derives its nutrition by diffusion from the perichondrium, necrosis and consequent structural deformity occurs.

In the early phase of infection, treatment should focus on eradicating *Pseudomonas aeruginosa* and *Staphylococcus aureus*. Antipseudomonal agents such as oral ciprofloxacin or intravenous ticarcillin or carbenicillin are necessary. Ciprofloxacin also has good activity against *S aureus*. The patient must be kept under close observation and admitted as an inpatient to an ear, nose, and throat department in the event of a failure to respond to this line of treatment. Surgical intervention is required at the earliest sign of an abscess.

No statutory regulations exist on body piercing. Doctors should be vigilant to intervene early and aggressively to prevent the considerable cosmetic sequelae that usually occur in young people who have undergone high ear piercing principally for its aesthetic effect.

Contributors: JH wrote two case reports, performed the literature search, was a major contributor to the writing of the article, and will act as guarantor. AF searched the ICD codes to determine the trend in the incidence of auricular perichondritis (and drew the graph) and was a major contributor to the writing of the article. CM did an internet search for information on training periods for UK ear piercers and visited ear piercing establishments. KG contacted the Department of Health for guidelines on body piercing and searched for any statutory regulations on the subject. GS provided information on the Royal College of Nursing conference on body piercing and searched newspapers for articles. RR had the original idea for the article and is the consultant responsible for the patients reported here.

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One hundred years ago Reform in medical dinners

Sir,—I was present at the dinner of the Edinburgh University Club on Wednesday evening last, and I positively enjoyed myself. As a rule, hospital dinners and medical society dinners are sad and saddening affairs. There is an absurdly long *menu* to be gone through (in the midst of which a poisoned cup containing *punch à la Romaine* is apt to appear), and after dinner comes along list of speeches which, as a rule, severely tax the patience of those who have dined. On many occasions the night is made still more tedious and prolonged by sandwiching songs and (so called) comic recitations between the speeches. The result is that it is often past 11 o'clock before the chairman has had his health drunk and the meeting can break up. For two hours, more or less, the guests have been breathing the atmosphere of a hot unventilated room, heavily charged with tobacco

smoke. What wonder if next morning one's head feels like a wooden idol's and one's mouth like the bottom of a parrot's cage?

Now, this Edinburgh dinner was splendid. The bill of fare was short and good; there were very few speeches and they were all over soon after 10 o'clock. There were three songs sung by an old Edinburgh student with a chest measurement of about 48 inches and a voice to match. He charmed everyone. I must not say where this dinner was held, or people may take my letter as an advertisement; but if any wants to learn how to make a medical dinner really delightful, let him communicate with John Chiene and George Sutherland.—I am, etc.,

Cock-A-Leekie.

PS—I did not drink the loving-cup, but I saw it go three times round one table. (BMJ 1901;ii:1575)

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